

## In the news

### MIRROR IMAGE

The social deficits associated with autism, which include difficulty communicating and understanding environmental cues, such as facial expression, have been extensively reported. However, the neural mechanisms behind the disorder remain in question. One proposed culprit is the mirror neuron system, which is thought to be involved in interpreting the emotions of others. Further support for this idea has now been provided by a group of US scientists, who have shown that activation of the mirror neuron system is much reduced in the brains of children with autism.

Neuroscientists believe that mirror neurons fire in response to the facial expressions of others, allowing our brains to 'mirror' their actions and so understand their feelings. Mirella Dapretto, who led the research at the University of California, Los Angeles, USA, said, "The mirroring mechanism may underlie the remarkable ability to read others' emotional states from a mere glance" (*Guardian*, 6 December 2005). "Our findings suggest that a dysfunctional mirror neuron system may underlie the social deficits observed in autism. This is exciting because we finally have an account that can explain all core symptoms of this disorder" (*Guardian*).

The researchers observed not only that activation in the brain area containing mirror neurons — the inferior frontal gyrus pars opercularis — was reduced in children with autism, but also that the extent of the decrease in activation correlated with the severity of symptoms.

Michael Rutter of the Institute of Psychiatry, London, UK, agreed that "The general notion of linking mirror neurons with the social deficit in autism is quite reasonable" (*BBC News Online*, 5 December 2005). However, he also observed "...we need more research into the brain systems that might be involved. These might involve mirror neurons, but we need more studies" (*BBC News Online*).

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